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MANAGING LIQUIDITY RISK IN BANKS

Case study Rural Investment Credit Bank Cameroon

Thesis

CENTRIA UNIVERSITY OF APPLIED SCIENCES

Business Management

March 2018

ABSTRACT

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Degree programme Business Management		
Name of thesis MANAGING LIQUIDITY RISKS IN BANKS Case Study Rural Investment Credit Bank Cameroon		
Instructor Birgitta Niemi		Pages 25 + 1
Supervisor Birgitta Niemi		
<p>The research title Managing liquidity risks in banks was carried out in Rural investment credit bank (RIC) Bamenda, North West region Cameroon. The research was carried out based on the observation that in most financial institutions in Cameroon, despite adequate capital levels still experienced difficulties because they did not manage their liquidity in a prudent manner. The technique of managing liquidity risk was not the best. The aim of this researcher is to assess the cause of liquidity problems faced by the institution and how it can properly be managed.</p> <p>This study is arranged into five different structures; introduction, presentation of the case company, risk management theories, presentation and analysis of data and recommendations. Research questions were issued and some found responses in the theoretical part of the research. From primary data, the researcher used a questionnaire which was administered on tables with a sample of 18 and 10 persons responded accurately which was used in the research, discussion with staff; on the spot observation and interview. Tables were used for presentation of data collected. From the analysis of data, it was discovered that the most appropriate way to manage liquidity risk is through stored liquidity management, and the main cause of liquidity risk is concentration of loans in a sector. Generally, it could be observed from this research work that; despite the increasing importance of Liquidity risk management which is the backbone of all financial institution, most institutions still fail to meet up with the liquidity needs of their customers. This is because most workers recruited are not expertise or skilled to do the job so far as liquidity risk management is concern. The organization used poor recruitment and selection procedure, concentration of loans in a particular sector and maturity miss match.</p> <p>The researcher then recommended that rural investment credit should create a risk management department that will effectively manage the recruitment, selection, and training of liquidity risk managers in the institution, diversity their risk by spreading loans to other sectors such as education, agriculture and real estate; they should match their assets with their liabilities, and should also follow strictly the prudential ratio. The researcher then suggested that further studies should be carried out in this same field.</p>		
Key words Liquidity risk, causes, strategies, Measuring liquidity Risk		

ABSTRACT
CONTENTS

1 INTRODUCTION.....1

2 PRESENTATION OF ORGANIZATION.....4

3 THE THEORY OF LIQUIDITY RISK MANAGEMENT.....6

3.1 Causes of Liquidity Risk.....8

3.2 Strategies Used in Managing Bank Liquidity Problems.....10

3.3 Factors Used in Accessing the Liquidity Needs of Customers.....11

3.4 Methods Use in Measuring Bank Liquidity Risk.....14

4 PRESENTATION AND ANALYSIS OF DATA.....15

4.1 Identification of Respondents.....15

4.2 Administration of Data Collection Tools.....16

4.3 Interpretation of Results.....18

5 CONCLUSION AND RECOMMENDATION.....21

REFERENCES24

APPENDIX

1 INTRODUCTION

This research is about liquidity risk management in bank. The research was carried out in at Rural Investment Credit (RIC) Bamenda, Cameroon. The reason for this research will be to improve and analyse liquidity risk management in rural investment credit company Cameroon. The result of this research will be of great important not just to the case company rural investment credit but also to scholars and researchers. The main beneficiaries to this research will be the policy makers, board of directors and the liquidity risk management department of rural investment credit bank. With the discoveries they will get some rule or guidelines on policy making and executions to better the part of liquidity risk management.

This research topic is word researchable because the researcher notice how liquidity risk was poorly managed by rural investment credit which does not only affects the institution but also goes a long way to affect the customers who have entrusted their hope and savings in the institution. Towards the end of this research, there will be some strategies that will enable liquidity risk managers and directors of rural investment credit bank Cameroon to be able to identify, manage, measure, assess, anticipate and deal with major liquidity risk more effectively in the institution there by improving liquidity risk management which goes a long way to affect the performance of the institution.

Financial institution or banks is defined as a money related organization (FI) is an organization occupied with the matter of managing fiscal exchanges, for example, stores, credits, speculations and cash trade. Monetary organizations incorporate an expansive scope of business operations inside the budgetary administrations area, including banks, put stock in organizations, insurance agencies, and financier firms or venture merchants. For all intents and purposes everybody living in a created economy has a progressing or possibly occasional requirement for the administrations of money related organizations. Financial institutions need to maintain some level of liquidity to meet up with the demands of the anticipated and unanticipated customers.

Financial institutions now are days are prone to various financial risk some Of which include the risk that depositors will suddenly withdraw their deposit that is liquidity risk, borrowers may pay their loans on time or not that is credit risk, the rate of interest may change at any given point in time that is interest rate risk, the computer system of the bank can fail or the institution gets burn that is operational risk, this is to say liquidity risk is not the only risk faced by financial institutions (Cecchetti & Schoenholtz 2011). A problem will arise if there is inadequate liquidity or cash to meet up with the liquidity need of the customers. Inadequate liquidity will result to liquidity risk within which it is very detrimental to the

health of any financial institution as it might lead to bank runs and eventually collapse of the institution. The dilemma faced by any financial institution is that of reconciling liquidity. It will be doing so at the expense of profitability on the other hand, if a financial institution is interested in making high profits, it will invest the liquidity at the expense of liquidity maintenance for its customers. This will call for liquidity risk (Cecchetti & Schoenholtz 2011).

Liquidity risk management is a major activity of every financial institution therefore every financial institution strives to provide and maintain a certain level of liquidity on a daily basis. This liquidity hazard itself is incomprehensible but it is possible through a dynamic liquidity chance administration arrangement, to moderate its negative impacts (Milos 2014, 14-16).

Liquidity risk is defined as the possibility of negative effects on the interest of owners, customers and other stakeholders of the financial institution resulting from the inability to meet current payment obligation in a timely and cost-efficient manner without acquiring unsatisfactory misfortunes (Wiley 2014, 4). The BCBS (2008, 2) defines liquidity as “the ability to fund increases in assets and meet obligations as they come due.”

Banks are exposed to liquidity risk because they transform liquid deposits (liabilities) to illiquid loans (assets). These are the key operations of the banks and the liquidity risk management's role is to ensure their continuity. In addition, the liquidity position is related to stakeholders' confidence. A bank having no confidence can face liquidity shortfalls for example withdrawal of the deposits (Armstrong 2008, 47).

However, there is no financial institution that is not prone to liquidity risk and it has been noticed of recent that it is one of the greatest contributory factors to bank failure nowadays. Therefore, if a financial institution wants to “eat well” (make profit) it should put in mind the risk that awaits her. Nonetheless the success of any financial institution will depend on how it estimate its liquidity needs for example it might be through the structure of deposit or surplus that determines performance will be at stake.

The Aim of the work is to provide the reader with an overview of liquidity risk management, theories on liquidity risk management and what causes liquidity risk in financial institutions. The primary objective of this research is to examine how liquidity risk is being manage in banks. There are also Specific objectives which are. To examine the causes of liquidity risk in financial institutions, to examine the factors used in assessing the liquidity needs of customers in financial institutions, to investigate how liquidity risk is being managed in financial institutions and to make appropriate recommendations.

The analyst in order to be more explicit in his research, utilized both primary and secondary sources of information, which is otherwise called direct information gathered through questionnaires issued to the staff of rural investment credit bank, interview which was also a method to gather information specifically from the source and giving affirmation of genuine data gotten since it was an immediate contact.

Auxiliary information (second hand data), was likewise utilized. It was gotten from effectively existing records, diaries and different reports of the organization, which the researcher could have available to him, consulting several professional studies on the topic this will be done by using google scholar, science direct and the school library. The researcher based his findings mostly by the utilization of primary information, which was more solid because of its sources. Moreover, this work depends on the scientist temporary job involvement in the bank.

2 PRESENTATION OF ORGANIZATION

Rural investment credit bank (RIC). Is in Cameroon this organization was created on the 2nd of July 1998. Registration certificate number OU/CO/28/98/1587 of 2/7/1998, Tax payer card number M050200017 807 Z and its head office is in five regions of Cameroon that is the North-West region Bamenda, South West region Buea, Littoral region Douala, West region Bafoussam, and Central region Yaoundé. It is the leading independent bank in Cameroon serving sellers and retailers. This rural investment bank has branches in all the 10 regions of Cameroon and in other parts of Africa. Rural investment bank is one of the largest banks in Cameroon. While rural investment bank plays a leading role in the continuous growth in private sector and can offer innovative solutions to their customers (<http://www.ric-cameroon.cm>).

Rural investment credit is in partnership with other banks such as Afriland first bank, union bank of Africa, Ecobank, and national financial bank, united bank of Africa and Bicec bank. Rural investment credit is in partnership with western union as far as international transactions transfers are concern.

Rural investment bank gives complete scope of money related answer for multinationals, governments, parasites and SMEs that are anticipated from a world class coordinated venture. It is the main bank of exchange in Cameroon it manages 10 monetary forms and they have more than 15years involvement in container African arrangement beginning and execution. Their concentration is Africa the district between North Africa and South Africa which has the wealthiest potential for development.

Rural investment bank Cameroon is managed by the Banking Commission of CEMAC Region (CO-BAC) controlling body of the saving money business in CEMAC Region, itself under the expert of the Bank of Central Bank (BEAC).

Investment bank Cameroon has 20 branches and this entire branch has money point with about 210 workers as of 2016 as compared from the previous year's which they had limited workers. Contrasted with the earlier year, the accomplishments of 2016 demonstrate a critical change in a few ways. Starting at two branches which were opened in a newly created area in Cameroon called Oshie and Andek, so in this way they now have 22 branches and with ATM money points available at 12 branches. The researcher did the entry level position and research in one of the branches of rural investment bank in

Cameroon precisely in Bamenda which is the Northwest part of Cameroon (<http://www.ric-cameroon.cm>).

With the introduction of ATM, it facilitates transaction for the customer, this is because the bank will always make sure that there should be enough liquidity available for customers at any point in time since withdrawals at the ATM cash point needs no prior notice there by trying to fight against liquidity risk.

There are basically three types of liquidity risk which are trading liquidity risk also known as market liquidity risk it is when the market lacks the capacity to handle transactions. This is the hazard that you won't have the capacity to offer your advantages inside a sensible measure of time at a nice cost. This was what I notice with my case company which was a major risk to the organization. This organization was holding less illiquid assets which were very difficult to easily convert to cash quick enough and at a reasonable price to meet up with customer's demands (Georgei 2015).

Funding liquidity risk this is the risk that a financial institution cannot meet up with its customer's demands when they fall due and when such starts to arise the available assets may not be sold at a reasonable price. Therefore, every organization should be able to manage its liquidity to avoid risk. There is also operational liquidity risk this situation where a bank does not have enough cash at hand to meet operations (Georgei 2015).

3 THE THEORY OF LIQUIDITY RISK MANAGEMENT

Loanable Funds Theory refers to the amount of money saved by individuals and organizations in an economy for the purpose of lending out to borrowers rather than being used for consumption. The supply of Loanable funds comes from organizations, businesses and individuals who have saved some extra money for investment purposes in this theory, he said the concentration of loans in a particular sector is the main cause of liquidity risk therefore loanable funds should be diversified (Bibow 2005).

They lend money to borrowers at an interest rate on the demand side of Loanable funds, individuals and organizations demand loans for other investment purposes; for example, an industry may borrow to purchase capital assets like machines, or an individual may have to borrow to build a house with the hope that these assets gain an increase in value over time. Therefore, the demand for Loanable funds generates from the desire to invest through borrowing. The demand and supply of Loanable funds mentioned above gives a perfect example of market analysis of Loanable funds theory (Bibow 2005).

Shiftability theory, this theory explains that banks and organization can maintain liquidity if they always have assets that can easily be shifted or sold for money given that there is a ready market. Shift ability theory was developed, focusing on the point that banks must arrange their portfolio in a way that they can get their desired liquidity. Investment is made in secondary money market like, treasury bills, and securities issued by reputed companies so that liquidity can be achieve at an insignificant amount of lost values. Banks can also get cash from central banks in case of difficulties simply by keeping the instruments as security.

Using the Shift ability, helps the bank to run efficiently with fewer cash reserves or investing in long term assets. The Shift ability banking system also tries to avoid liquidity crises by enabling banks to always sell or repo (a term for repurchase agreement which is a form of short term borrowing for dealers in government securities) at good prices (Mouton 1918).

According to Drehmann & Nikolaou theory (2010), liquidity risk is money related hazard that for a specific time frame a given monetary resource, security or ware cannot be exchanged rapidly enough in the market without affecting the market cost. Subsidizing liquidity chance is the hazard that a money related establishment, although very much promoted or dissolvable, would not have the capacity to keep up a consistent harmony between its money inflows and Out pouring or would have the capacity to do

as such just at unreasonable cost over a brief timeframe. What is interesting in Drehmann and Nikolaou theory is that they have established that funding liquidity risk possesses two major characteristics that are future random inflows and outflows of cash and future random prices of liquidity obtained from varied sources.

Furthermore, in these theories they contend that financing liquidity ought to be seen as a double idea that is a bank's capacity or powerlessness to settle commitments at a specific point in time and that, instead of subsidizing liquidity, financing liquidity chance is a boundless forward-looking idea in accordance with the likelihood dispersion of future results. In this theory, it is discussed that Liquidity issues may have ominous results for a bank's income and capital and, in extraordinary conditions may prompt the fall of a bank which in each other regard, is dissolvable.

A liquidity emergency influencing a bank that plays either a minor or a noteworthy part in budgetary intermediation may have fundamental outcomes for different banks and for the whole saving money framework. A sound and reasonable liquidity hazard administration standard is fundamental both to the suitability of each bank and to the conservation of the general saving money steadiness. As needs be, this investigation planned to explain a useful liquidity chance administration structure intended to meet both the necessities of the anticipated and unanticipated customers and the more extensive prerequisites of overseeing and alleviating liquidity chance inside a bank. Looking at the competitive environment, there is a need for banks to plan and manage their liquidity so as to avoid the risk of running out of cash when cash is needed by both anticipated and unanticipated customers, (Drehmann & Nikolaou 2010).

According to Chung-Huashen (2009) from the department of finance Of National Taiwan University carried out a study on the "Impact of liquidity risk management on banks performance". The study was to employ alternative liquidity risk measure beside liquidity ratio and investigate the causes of liquidity risk (causes of liquidity risk model) using an unbalanced panel data set of 12 advance economies commercial banks over the period 1994-2006.

Thus, apply panel data instrumental variables regression, using two stage list squares (2SLS) estimate bank liquidity risk and performance model. They found that liquidity risk is the endogenous determinant of bank performance. To him, the reasons for liquidity hazard incorporate segments of liquidity assets and reliance on outside financing, using supervisory and administrative variables and macro-economic elements. Moreover, they likewise found out that liquidity risk may bring down banks profitability (return on average asset equities) because of high cost of funds, but increase bank net interest margins.

However, they classified nations as bank based or market based budgetary system. The outcome demonstrated that liquidity risk is negatively identified with banks execution when it is not legitimately managed (Chung-Huashen 2009).

According to Scannella, E. (2016), financial institution must be ever mindful of the possibilities they will be required to sell investment securities in advance of their maturity due to liquidity risk. Thus, a key issue that a portfolio manager must face in selecting a security for investment purpose is the breadth and depth of its resale market. Liquid securities are by definition those investments that have a ready market, relatively stable price over time, and high probability of recovering the bank's original invested capital that is the risk to principal is low.

United State government securities are generally the most liquid and have the most active resale markets followed by federal agencies of a large volume of liquid readily marketable securities tend to reduce a banks average yield from its earnings assets and other factors held constant tends to reduce its profitability and liquidity that must be re-evaluated daily as market interest rates and banks' exposure to liquidity risk change.

According to (Drehmann & Nikolaou 2010) liquidity risk is the danger of running out of cash when cash is needed to cover deposit withdrawals and to meet the credit request of good customers. If a bank cannot raise cash in timely fashion, it is likely to lose many of its customers and suffer a loss in earnings for its owners. If the cash shortages persist, it may lead to runs on the bank and ultimate collapse the inability of the bank to meet its liquidity needs at reasonable cost is often a prime signal that the bank is in serious trouble due to the significant exposure of banks to liquidity pressures arising from several sources. In this theory, they explain what causes liquidity risk in financial institutions as will be examine below.

3.1 Causes of Liquidity Risk

Firstly, banks borrow large amount of short term deposits and reserves from individuals and businesses and from other lending institutions and then turn around and make long term credit available to their liabilities. Rarely would incoming cash flow from assets exactly balance the cash flowing out to cover liabilities. A problem related to the maturity mismatched situation is that banks hold an unusual high proportion of liabilities subject to immediate payment such as demand deposits now accounts and money markets borrowings. Thus, banks must always stand ready to meet immediate cash demands that can be

substantial at times, especially near the end of the week, the first of each month, during certain seasons of the year (Drehmann & Nikolaou 2010).

Another source or cause of liquidity problems is the banks sensitivity to changes in interest rates raises; some depositors will withdraw their funds in search of high returns elsewhere. Many loan customers may postpone new loan request or speed up their drawings on other credit lines that carry lower interest rates. Thus, changing interest rates affects both customers demand for deposits and customers demand for loans, each of which has a potent impact on a bank liquidity position. Moreover, movements in interest rates affects the market values of assets the bank may need to sell in order to raise additional liquid funds and they directly affect the cost of borrowing in the money market (Drehmann & Nikolaou 2010).

A financial institution must give high priority in meeting demands for liquidity. Failing in this area may severely damage public confidence in the institution. We can imagine the action of bank customers if the teller windows and teller machines had to be closed one morning because the bank was temporary out of cash and could not cash checks or meet deposit withdrawals (as happened to a bank in Montana several years ago, promoting a federal investigation). One of the most important tasks of a liquidity manager is to keep close contact with the banks largest depositors and holders of large unused credit lines to determine if and when withdrawals of funds will be made and to make sure adequate funds are available (Viral 2006, 460-463).

In addition, loan delinquency is a major cause of liquidity risk in a financial institution take for an example a potential customer obtains a loan from the bank and agrees to pay on a certain day and that customer falls due that is he or she is unable to pay back as propose and customers need their funds in this case it obvious that there will be shortage of liquidity in the bank which will create fear in the minds of customers by so doing will affects the health of the organisation negatively.

To add, fraud and embezzlement from members of the organisation can cause liquidity risk in a financial institution which is very detrimental for a financial institution in that it may lead to bank runs and an ultimate collapse of the bank. Miss management of funds these are some of the causes of liquidity risk in financial institutions (Viral 2006).

3.2 Strategies used in Managing Bank Liquidity Problems

Liquidity risk management is today a noteworthy concentration for controllers, because of expanding many-sided quality of budgetary markets and concerns identified with insufficient recognizable proof and overseeing liquidity chance, exacerbated by the monetary emergency. Since the money related market is progressively interconnected, a liquidity shortfall at a single institution can have system-wide consequences. They brought out some strategies to manage bank liquidity problems which will be examine below

Asset liquidity management or Asset conversion strategy is the best approach to meet bank liquidity needs. In its purest form this strategy called storing liquidity in the form of holding of liquid assets predominantly in cash and marketable securities. When liquidity is needed, selected assets are sold for cash until all the banks demand for cash are met. This liquidity management strategy is often called assets conversion because liquidity funds are raised by converting non- cash assets into cash (Matz & Neu 2007, 98-100).

Amongst the most popular liquid assets for banks are treasury bills, federal fund loans, deposit held with other banks, municipal bonds, federal agency securities, and banker's acceptance and Eurocurrency loans. Although a bank can strengthen its liquidity position by holding more liquid assets, it will not necessarily be liquid institution if it thus so, because a bank liquidity position is also influenced by the demand for liquidity made against it. Remember that a bank is liquid only if it has Asset at reasonable cost to liquid funds at exactly the amounts required at the time they are needed. Asset liquidity management approach is used mainly by small and big banks that find it a less risky approach to liquidity management than relying on borrowings (Matz & Neu 2007, 98-100).

Borrowed Liquidity (risk) Management methodologies as of late numerous banks drove by the biggest business started to raise a greater amount of their liquidity funds through borrowings in the currency market. This borrowed liquidity technique regularly called purchase liquidity management in its purest form calls for obtaining enough immediately spendable funds to cover every expected demands for liquidity (Adalsteinsson 2014).

Balance (Asset and liability) management strategy. Due to the risk inherent in relying on borrowed liquidity and the cost of storing liquidity in assets most banks compromise in choosing their liquidity

management strategy and both asset management and liability management strategy under a balance liquidity management approach, some of the expected demands for liquidity are stored in assets (principally holding of marketable securities and deposit at other banks) why other anticipated liquidity needs are back stopped by advanced arrangement for lines of credit from correspondent bank or other suppliers of funds. Unexpected cash needs are typically met from near term borrowings. Longer term liquidity needs can be planned for and funds to meet them parked in short-term and medium-term and securities that will roll over into cash as those liquidity needs arises (Matz & Neu 2007,65).

3.3 Factors use in accessing the Liquidity needs of Customers

The structure of deposit approach is a method used to assess the liquidity needs of customers in a financial institution. The liquidity management department should focus on the deposit of the organization which is divided into various categories on the basis of their probabilities of withdrawal and different amount of liquidity could be provided for the different types of deposits.

For example, deposits could be divided into the following categories depending in their probability of withdrawal over some given planning period of (a) hot money (b) vulnerable deposits and (c) state deposits. Hot money could be those deposits almost certain to be withdrawn within the planning period example, a certificate of deposit held by a school district for the purpose of making a progress payment on a new school in the next ten days could be classified as hot money within a thirty days planning horizon (Douglas 2014).

Vulnerable deposits would be those deposits with some appreciable possibility of withdrawal but in which deposit withdrawal would be a certainty or near certainty. All large deposits should probably be viewed as vulnerable given their potential for disrupting the liquidity position of the organization.

Stable deposit would be a residual to those that are neither hot nor vulnerable. After the deposits have been categorized by probability of withdrawal, management must then determine the liquidity requirements of each of the categories. For example, the liquidity requirement of hot money will usually be 100% of the amount of hot money less reserve requirements against the deposit. Vulnerable deposits would have a lower liquidity requirement while the exact liquidity requirement for franc of vulnerable deposit is subject to management discretion a 20-25 % liquidity requirement ratio is not uncommon.

Finally, stable deposits would have even lower liquidity requirement with 5-10 % a reasonable number (Douglas 2014).

The structure of deposit method is significant as a liquidity estimation method because it requires management to focus on deposit volatility, the principal source of liquidity pressures yet this technique has a number of limitations. It is highly subjective in application in terms of classifying deposits according to probability of withdrawals and also in determining the amount of liquidity required for the different types of deposits. Sources and uses of funds a number of factors might be employed in estimating the exact liquidity needs for an individual bank. The most comprehensive is the sources and uses of funds approach. It takes into account the liquidity required for deposit withdrawals and to satisfy loan demand (Douglas 2014).

This approach begins with the proposition that for any given planning horizon of interest to management, it is possible to estimate anticipated changes in deposit and loans. Any withdrawals of deposits or increases in loans represent a use of funds. Conversely, an increase in deposit or decrease in loans is a source of funds. This technique requires a coordinated forecast of deposit and loan changes over the appropriate planning period. Each fall for example management may wish to plan liquidity level, for the coming year. They might then forecast the amount of loans and deposit at the end of each in the coming year month-to-month changes in these loans and deposits (added together) will then provide an estimate of liquidity needs over the annual planning period (Douglas 2014)

The first principle is that a bank is in charge of the sound administration of liquidity hazard. A bank ought to build up a robust liquidity risk management structure that guarantees it keeps up adequate liquidity, including a portion of unrestricted, high quality liquid assets, to withstand a range of stress events, including those involving the loss or impairment of both unsecured and secured subsidizing sources. Supervisors should assess the adequacy of both a bank's liquidity risk management framework and its liquidity position and should take prompt action if a bank is deficient in either area in order to protect depositors and to limit potential damage to the financial system (Wiley 2018).

Senior management ought to build up a strategy, approaches and practices to manage liquidity risk in accordance with the risk tolerance and to guarantee that the bank keeps up adequate liquidity. Senior administration ought to ceaselessly survey data on the bank's liquidity improvements and answer to the top managerial staff all the time. A bank's board of directors should review and approve the procedure,

approaches and practices related to the management of liquidity at least annually and guarantee that senior management manages liquidity risk effectively (Wiley 2018).

A bank ought to effectively screen and control liquidity risk exposures and financing needs inside and across lawful entities, business lines and monetary forms, considering lawful, management and operational restrictions to the transferability of liquidity. Also, a bank ought to set up a financing strategy that gives effective diversification in the sources and tenor of funding. It ought to keep up a progressing presence in its chosen funding markets and solid relationship with funds suppliers to promote effective diversification of funding sources. A bank ought to regularly measure its ability to raise finances rapidly from each source. It ought to distinguish the primary factors that influence its capacity to raise funds and screen those elements closely to ensure that estimates of fund raising capacity remain valid (Wiley 2018).

A bank ought to have a formal contingency funding plan (CFP) that clearly sets out the strategies for addressing liquidity setbacks in crisis circumstances. ACFP should outline policies to deal with a scope of stress conditions, set up clear lines of responsibility, incorporate clear invocation and escalation strategies and be consistently tested and updated to ensure that it is operationally hearty

A supervisor ought to speak with other supervisor and open experts, for example, central banks, both within and national outskirts, to encourage powerful participation with respect to the supervision and oversight of liquidity risk administration. Communication ought to occur frequently during ordinary circumstances, with the nature and frequency of the information sharing increase as appropriate during times of pressure (Wiley 2018).

A bank ought to perceive and consider the solid communications between liquidity risk and the other types of risk that they are exposed to, various types of financial and operating risks, including interest rate, credit, operational, legal and reputational risks may influence a bank's liquidity profile. Liquidity hazard regularly can emerge from apparent or genuine weaknesses, failures or issues in the management of other risk types. A bank should identify events that could have an impact on market and public perceptions about its soundness, particularly in wholesale markets (Wiley 2018).

3.4 Methods Used in Measuring Bank Liquidity Risk

According to monocle (2017), there are numerous sources of liquidity risk there are several ways of measuring it in this theory he was looking at how liquidity risk can be measured using the following methods.

Net liquidity position this is the difference between total source of liquidity and total uses of liquidity. Sources of liquidity or funds are the ways by which money enters the bank while uses are the ways by which money leaves the bank. The total sources minus total uses will give net liquidity position (NLP) Supposed the difference is positive it implies that the bank can still meet additional liquidity needs which may arise due to the uncertain nature of the market by up to the amount (Net liquidity).

$$NLP = \text{Total source of liquidity} - \text{total uses of liquidity (Monocle 2017)}.$$

Liquidity exposure ratio this involves calculating interpreting and comparing key ratios and balance sheets entries with those of other banks of similar size, business operations e. A good ratio here will be the loan to deposits ratio. A high L/D ratio relative to other banks could mean a bank is more likely to face liquidity problems than the other. Similarly, a high ratio of loan commitment to assets indicates the need for a high degree of liquidity to fund any unexpected takedowns of these loans by customers. That is how commitment bank often face more liquidity risk than low commitment banks (monocle 2017).

Financing gap is the difference between average loans and average deposits. That is
$$\text{financing gap} = \text{Average loans} - \text{Average deposits}.$$
 The longer the financing gap (i.e. average loans far greater than average deposits) the more likely the bank will face liquidity risk, unless the liquidity assets (cash, balanced held and investment in securities) can neutralize the gap. Liquidity planning this is a very important method for measuring liquidity risk. It has five main steps Delineate managerial responsibility that is who is responsible for what, establish a detailed list of funds provided most likely to withdraw funds as well as the pattern of withdrawal, identify the size of potential withdrawals, set internal limits on branches lending in anticipation for the withdrawals above, sequentially arrange assets for disposal to meet the estimates above (monocle 2017).

4 PRESENTATION AND ANALYSIS OF DATA

The research was conducted starting from March 15, 2016 and ends in July 14 in Cameroon case study Rural investment credit (RIC). This chapter illustrates how the researcher identified his respondent which can be through gender qualification, age, height and marital status. However, the researcher used only gender and qualification to identify his respondents. The motive gender is to illustrate that the researcher was not discriminative in selecting his sample size. This implies that both male and females made up the sample size. The reason behind qualification was to identify if the respondents were competent to answer the questionnaires.

4.1 Identification of Respondents

The researcher at this point identifies the respondents by considering gender, qualification, age, height and marital status with the use of tables. For instance, out of 18 respondents that constituted the sample size chosen randomly, from Rural investment credit, just 10 of them responded to the questionnaires correctly without errors. The other responses were also important in making general observations but were not used in this work in order to be clear with information analysed. Amongst the 10 responses considered by the researcher, 4 were female and 6 males. Educational levels of most respondents ranged between advanced level (A/L) higher national diplomat (HND), bachelor's degree.

TABLE 1. Identification of respondents by gender

Gender	Frequency	Percentage (%)
Male	6	60
Female	4	40
Total	10	100

From TABLE 1 above out of the 10 staff from rural investment credit who responded to the survey 6 were male and 4 female giving a percentage of 60 and 40 respectively.

TABLE 2. Identification of respondents by academic qualification

Qualification	Frequency	Percentage (%)
A/L	2	20
HND	3	30
Bachelor degree	5	50
Total	10	100

From TABLE 2 above of the ten staff of RIC 2 are advance level holders while 3 HND holders and 5 are Bachelor degree holders given a percentage of 20, 30 and 50 respectively.

4.2 Administration of data collection tools

Here, questionnaires were issued by the researcher to staff of the institution made up of close ended and open-ended questions. The respondent was then obliged to tick the correct answer in the open-ended questionnaires and also to fill in their choice of answer in the open-ended questionnaires. This was achieved by moving to the field to issue questionnaires which were then answered as demanded.

The researcher collected data using the primary source because primary source of data gives accurate information in the way the researcher requires. This can be through questionnaires, interviews and observation. With this, appropriate information is given to the researcher as demanded.

However, the researcher concentrated on questionnaires and observation. With questionnaires, the respondent is given time to answer the questions at his own pace unlike interviews where answers are being demanded immediately. Questionnaires are therefore one of the best ways of collecting data.

The researcher uses observation in collecting data since most FIs hardly reveal their information to third parties in order to maintain confidentiality the reason why the researcher used the method. There was equally need for secondary data obtained from journals of the company and other relevant documents of the company. Analysis of data collected will be seen below.

TABLE 3. Impact of liquidity risk management on profitability

Impact of liquidity risk management on profitability	Frequency	Percentage (%)
Respondents	10	100
TOTAL	10	100

From TABLE 3 above, all the respondents from RIC said liquidity risk lead to a decline or fall in profit resulting to 100 %.

TABLE 4. Causes of liquidity risk

Causes of liquidity risk	Frequency	Percentage (%)
Concentration of loans	5	50
Asset/liability mismatch	3	30
Investment of funds in current account	2	20
TOTAL	10	100

From TABLE 4 above out of the 10 respondents from RIC 5 said concentration of loans in a sector, 3 said asset liability mismatch and 2 said investment of funds in current account thereby scoring a percentage of 50, 30 and 20 respectively.

TABLE 5. Factors used in assessing liquidity needs of customers

Liquidity need of customers	Frequency	Percentage (%)
Forecasting method	10	100
Total	10	100

From TABLE 5 all the respondents from RIC said they use the forecasting method in accessing the liquidity needs of customers thereby scoring a percentage of 100 %. This is usually the case with small banks or microfinance institutions.

TABLE 6. How liquidity risk is managed

MANAGING LIQUIDITY RISK	FREQUENCY	PERCENTAGE (%)
Stored liquidity management	6	60
Purchase liquidity management	1	10
Both	3	30
Total	10	100

From TABLE 6 above, out of the 10 respondents from RIC 6 said stored liquidity management one said purchase liquidity management and 3 said both scoring a percentage of 60, 10 and 30 respectively.

TABLE 7: Area of concentration of loans

CONCENTRATION OF LOANS	FREQUENCY	PERCENTAGE (%)
Business	7	70
Agriculture	3	30
Total	10	100

From TABLE 7 above out of the 10 respondents from RIC seven said business and 3 said agriculture scoring a percentage of 70 and 30 respectively.

4.3 Interpretation of results

From TABLE 3 of data analysis all the 10 respondents said the liquidity problem that occurred in 2010/2011 led to a decline in profit resulting to a decline or a fall in profit. It can therefore be generalized that when liquidity risk occurs, it results to decline in profits, hence poor performance in the domain of profitability. This therefore implies that the amount of dividends that goes to shareholders will equally reduce. It can therefore be concluded that 100 % of FIs always face a decline in their profit whenever they face liquidity risk. This respond is true to and extend because (Chung-Huashen 2009) in his theory

the impact of liquidity risk management on banks performance put forth the idea that liquidity risk lowers bank profitability due to high cost of funding and reduces dividends to shareholders.

Furthermore, TABLE 4 of data analysis 50 % of the total respondents said the causes of liquidity risk was the concentration of loans in a particular sector while 30 % said asset/liability mismatch and 20 % said it is investment of funds in current account. From the data collected it can therefore be easily deduced that the concentration of loans in a particular sector is one of the highest causes of liquidity risk as 50 % of the respondents ticked this, which indicates the highest percentage as compared to other causes. This respond is true as can be seen in the loanable funds theory (Bibow 2005) which says that the concentration of loan in a particular sector is the main cause of liquidity risk and that banks should diversify their risk. So, the concentration of loan is covering 50% according to the risk that was mentioned.

From TABLE 5 of the data analysis, it is glaring that all the respondents from rural investment credit said they use the forecasting methods to assess or estimate the liquidity need of their customers (Douglas 2014). It is obvious that the forecasting method is often used by small banks. There is no doubt that forecasting method can be right or wrong. They can forecast that demand for funds would be low in March and April and use money to carry out investments on securities that would mature from May and above.

This might not be the case when May and April are due as economic conditions might instead tend to be favourable leading to a high withdrawal from the financial institutions. A liquidity problem might occur as these FIs would not have enough money to meet up with the liquidity needs of the customers. The customers money has been invested above during the period that they needed this money. It can therefore be concluded that smaller banks and other FIs use forecasting methods in assessing the liquidity need of customers based on the experience of management.

From TABLE 6 of the data analysis 60 % of the respondent said they used stored liquidity management to manage their liquidity risk while 30 % said they use purchase liquidity management and finally, 10% said they use both stored liquidity management and purchase liquidity management. It can therefore be deduced that the most appropriate way in which risk can be managed within a FIs is through store liquidity management as the highest number of respondents (60 %) tick this option. This is obvious as seen in the theory of (Matz & Neu 2007, 98-100) that the best approach to meet bank liquidity needs is storing liquidity in the form of holding liquid asset predominantly in cash and marketable security that can be easily sold for cash.

Furthermore, from TABLE 7 of the data analysis 70 % of the respondents said they concentrate more of their loans in the business sector while 30 % of the respondents said they concentrate more of their loans in the agricultural sector. It can therefore be generalized that most FIs in Bamenda concentrate more of their loans in the business sector and only few of them concentrate their loans in the agricultural sector.

This is true because most of the FIs in Bamenda are located along the commercial avenue where business dominates. This therefore implies that if the business sector fails due to business risk 70 % of FIs would face liquidity risk because investors will be unable to pay their loans due to business failures because may be by business risk or other factors such as poor knowledge about the business chosen.

5 CONCLUSION AND RECOMMENDATION

The research managing liquidity risk, case study rural investment credit (RIC) Bamenda North west region of Cameroon was carried out on March 15, 2016 to July 14 to clearly look at liquidity risk management. Carrying out this research successfully, the researcher issued 18 questionnaires to the staff of rural investment credit.

These questionnaires were used to collect data needed for the study. Amongst the staff only 10 were able to give accurate answers that were of help to the researcher. It was further observed from the survey that the most severe factors that cause liquidity risk included the following; banks sensitivity to interest rates, fraud, maturity miss match, concentration of loans. The researcher also looked at strategies used in managing bank liquidity which are asset liability management strategy, borrowed liquidity management strategy, and balance liquidity management strategy.

From TABLE 3, it is discovered that liquidity risk lead to decline in profit. 100 % of the respondents said liquidity risk led to fall in profit.

Furthermore, it was discovered that out of all the causes of liquidity risk concentration of loans in a particular sector is the highest cause of liquidity risk management as 70 % of the respondents who said business as compared to 30 % of the respondents who say agriculture. From TABLE 5 it is clear that rural investment credit used but the cashing method as a factor in estimating the liquidity needs of customer. it can be justified from TABLE 5 as 100 % of the respondents said they used the forecasting method.

From TABLE 6 of the data analysis it is discovered that rural investment credit used mostly the stored liquidity management strategy managing liquidity problem. This can be justified from TABLE 6 as 60 % of the respondents said stored liquidity management why 10 % said purchase liquidity management and 30% said both stored and purchase liquidity management strategy.

From the above analysis it can also be seen that rural investment credit just like every other financial institution focuses on reducing risk that affects it sustainability and such risk includes financial risk, operational risk and strategic risk which if not properly managed may leads to poor liquidity of the institution.

From the research findings, it can be concluded that the liquidity problem that occurred in rural investment credit causes a fall in profit and hence a drop-in performance. This can be justified from data analysis TABLE 3 where profit dropped leading to a 100 % fall in profit. Therefore, liquidity risk management has a positive and negative impact on the organization in as much as it can lead to the growth and profit making of the organization it can also leads to the collapse and subsequently the closure of the institution.

Based on the research findings, the following recommendations are made pertaining to the problems under investigation. These recommendations if implemented will lead to a healthy financial or banking system.

Firstly, rural investment credit should diversify risk by spreading their loans to other sectors such as education, agriculture and real estate etc. so that when one sector is failing, revenue and principals from other sectors will cover the loss realize from that sector.

Secondly, the period COBAC takes to come for control is too long and so should be reduced from one year and above to a month or few months so that Ric will not have any opportunity to go against the prudential rule set by COBAC or use customer money for a different purpose. The one year and above that COBAC takes to come for control is too long for FIs to go astray and face liquidity problems.

Thirdly, rural investment credit should always maintain adequate reserve for such a contingency so that when it occurs they will easily solve it without noticing severe impact.

Fourthly, in giving out loans RIC should match their assets to their liabilities that is the period of maturity of the loan should be match with the period people need their money so that when the loans mature during this period, they would be used to pay back customers money. In a nutshell assets/liability mismatch should be completely avoided.

Monetary authorities should ensure that FIs follow strictly the prudential ratios as to avoid the occurrence of the liquidity risk. The researcher also recommended that rural investment credit should create a risk management department that will effectively manage the recruitment, selection, and training of liquidity risk managers in the institution.

These recommendations were made after a thorough survey and analyses of data received from the survey that directly reflected how liquidity risk is managed in the organization the research is limited to managing liquidity risk leaving out other numerous factors that affect organizational performance and other factors that liquidity risk has impact on. Having this in mind, the researcher therefore suggested that further studies should be carried out in the following related topics; the impact of liquidity risk management on organizational performance, the impact of liquidity risk management on profitability.

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QUESTIONNAIRE

Dear Sir/Madame,

I am a student of Centria University of Applied sciences and out on research on the topic “The liquidity risk management in banks”. I kindly plead on you to provide appropriate answers to the questions below that will enable the researcher get correct data to come out with information. This will be treated with confidentiality as it is for academic purpose. Please mark **X** in the box next to the answer of your choice or write in the space provided as the case may be. Thanks for corporation.

1. Sex: Male ☐ Female ☐
2. Qualification A/L ☐ HND ☐ Bachelors ☐
3. Have you ever experienced liquidity problems in your organization?
a) Yes ☐ b) No ☐
4. If yes, in which year did you experience liquidity problem? _____
5. What was the impact of liquidity risk on your profitability? _____
6. What was the percentage drop in profit compared to base year profit?

7. What was/were the cause(s) of the liquidity problem?
a) Concentration of loans in a particular sector ☐
b) Asset liability mismatch ☐
c) Credit risk ☐
d) Investment of funds from current account ☐
e) Fraud ☐
If any other cause, please specify _____
8. What are the factors used in accessing the liquidity needs of customers in your financial institution? _____
9. How did you manage the liquidity problem? a) stored liquidity management ☐ b) Purchase liquidity management ☐ c) Both ☐
10. How is liquidity risk measured in your institution? a) Net liquidity position (NLP) ☐ b) Peer group ratio comparison ☐
c) Liquidity index method ☐ d) liquidity planning method ☐ e) if any other method, please specify _____

11. In which of the sectors do you concentrate more loans on?

12. a) Agriculture ☐ b) Business ☐ c) Industrial ☐ d) School fees ☐ e) Real estates ☐

12. Did the liquidity reduce your rate of giving out loans? a) Yes ☐ b) No ☐

13. Is liquidity risk the only risk that has ever threatened your organization? a) Yes ☐ b) No ☐ or-

14 What are some of the impact of liquidity risk management on the performance of the organisation

Positive -----

Negative-----

15. How do you think liquidity management problems can be solved-----